

Amendment and Response
Applicants: Nicola Ghelli et al.
Serial No.: 09/921,012

Attorney Docket: DID1040US

REMARKS

Claims 1 – 21 are present in this application. Claims 1 – 18 are under examination and are rejected. Claims 19 – 21 are withdrawn pursuant to restriction.

In the specification, the paragraph beginning at page 6, line 17 has been amended for a minor editorial correction at page 6, line 23.

In amended Figs. 1 and 3 - 5, the previously omitted identification of elements 10a (fixed edge of annular band of elastic material 10), 20a (upper interior surface of pumping chamber 22), 20b (lower interior surface of pumping chamber 22) and 22 (pumping chamber) have been added.

Rejection under 35 U.S.C. 103:

Responsive to the Examiner's inquiry under 37 C.F.R. 1.56, Applicants confirm that the subject matter of all claims of this application was commonly owned at the time the inventions claimed therein were made.

Claims 1 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 4,662,829 to Nehring ("Nehring") in view of U.S. Pat. No. 5,413,599 to Imachi, et al. ("Imachi"). Withdrawal of this rejection as unsupportable is respectfully requested in light of the following remarks.

The teachings of Nehring in view of Imachi, or of either or both of these references in connection with any of the other references of record, do not support a sustainable finding of obviousness of the present claims. Independent claims 1, 7 and 13 require that the blood outlet valve includes a flexible portion having a hole and a peripheral edge affixed to the first exterior surface. Neither Nehring nor Imachi teach such structure. Nehring discloses a pump having check valves at the inlet and outlet ends of the pump. However, the check valves do not comprise

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a flexible material. Although Imachi discloses a medical valve comprising a flexible membrane, the membrane does not have a hole nor does the membrane have a peripheral edge affixed to an exterior surface of a medical device.

According to Imachi, FIGS. 1 – 2, the movable valve membrane 1 “is mounted on the disk-shaped valve seat 2, and the valve seat 2 and movable valve membrane 1 are fixed at the centers thereof by setting member 5.” (Col. 2, lines 57 – 63)

According to Imachi, FIGS. 3: “In the valve apparatus of the present embodiment, a funnel-shaped valve seat 8 having many slit-shaped fluid-passing through holes 9 extending in the radial direction and a movable valve membrane 7 having a funnel-like shape conforming to the shape of the valve seat and being composed of a flexible membrane are fixed at the centers thereof by setting member 10.” (col. 3, lines 55 – 62) Imachi further states, in reference to the embodiment of FIGS. 3: “The movable valve membrane is fixed substantially at the center thereof to the valve seat.” (col. 4, lines 12- 13) Thus, Imachi does not meet the terms of claims 1, 7 and 13 that require “a blood outlet valve comprising flexible material having a peripheral edge affixed to the exterior surface.”

Therefore, even if there were motivation to combine the valve of Imachi with the pump of Nehring such combination would not result in a pump having the features of the claimed invention. Claims 2 – 6, 8 – 12 and 14 – 18 provide other patentable features that further distinguish over any and all of the references of record, taken separately or together in any combination.

Imachi and Nehring, taken separately or together or with any of the other references of record in any combination, do not provide a sustainable finding of obviousness of the present claims. Withdrawal of this rejection is seen to be in order and is solicited.

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Conclusion:

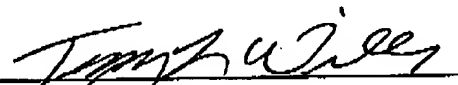
In view of Applicants' remarks, claims 1 – 18 are in condition to be allowed. Claims 19 – 21 are withdrawn pursuant to the restriction requirement. If the only issue remaining before issuance of a Notice of Allowance is the presence of withdrawn claims, the Examiner is authorized to cancel the withdrawn claims, and Applicants preserve the right to present the withdrawn claims in a divisional application. Should the Examiner consider that any other minor matters remain prior to the issuance of a Notice of Allowance, the Examiner is requested to telephone the undersigned to reach prompt resolution thereof.

If any additional fees are due in connection with the filing of this paper, please charge the fees to our Deposit Account No. 16-2312. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our deposit account.

Respectfully submitted,

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By


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